

**REMARKS**

Claims 1-14 are currently pending in the application. Claim 1 has been amended to better specify the claimed invention. Claims 12-14 have been added and are directed to additional features of the invention. Applicants submit claims 12-14 distinguish over the references of record and are therefore patentable. No new matter has been added. Reconsideration of the application is respectfully requested in view of the amendments and following remarks.

***35 U.S.C. §103 Rejection***

Claims 1-5 and 11 were rejected under 35 U.S.C. §103(a) as being unpatentable by U. S. Patent No. 6,006,800 issued to Nakano (“Nakano”). Claims 6-8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nakano in view of U. S. Patent Publication No. 20010048899 to Marouiss (“Marouiss”). Claims 9 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nakano in view of U. S. Patent Publication No. 20030032191 to Hilson (“Hilson”). These rejections are respectfully traversed.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the reference or references, when combined, must disclose or suggest all of the claim limitations. The motivation to modify the prior art and the reasonable expectation of success must both be found in the prior art and not based upon a patent applicant’s disclosure. *See in re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Applicants submit that neither Nakano, nor the other prior art of record, singly or in combination, disclose or suggest all the claimed limitations, as amended. Moreover, Applicants submit the claimed invention produces significantly new advantages and results over Nakano and the prior art of record.

Claim 1 sets forth, in part:

*a first reagent vessel having a plurality of wells oriented in the Y-axis direction for storing a first reagent to be supplied to the dispensing tips of the first dispensing tip container;*

*a second reagent vessel having a plurality of wells oriented in the X-axis direction for storing a second reagent to be supplied to the dispensing tips of the second dispensing tip container; and*

*a microplate arranged in the main frame body having a plurality of wells arranged in a matrix of n x m, the first reagent being discharged in a plurality of wells oriented in the Y-axis direction and the second reagent being discharged in a plurality of wells oriented in the X-axis direction of the microplate.* (Emphasis added)

Applicants respectfully submit that Nakano does not contemplate these features. For example, in Nakano, rack 2 and microplates 4, 5 are all arranged with the same orientation. A rejection under 35 U.S.C. §103 based on obviousness cannot be properly maintained without a proper disclosure of each and every element and the motivation to rearrange the elements. Here Nakano fails to provide any motivation that would lead one of ordinary skill in the art to rearrange the components as claimed. Accordingly, the Examiner is respectfully requested to withdraw the rejection under 35 U.S.C. §103.

Moreover, the Examiner seems to consider the disposing box 6 of Nakano as corresponding to the “second dispensing tip container” of the claimed invention to which Applicants vigorously disagree. The disposing box 6 merely serves as a box for exclusively collecting used tips 44 (see col. 4, line 15). This is equivalent to Applicants tip disposal container 54 (see page 28, lines 5-10 and Fig. 5). Whereas, the dispensing tip arrays of the claimed invention provides new or clean tips (see at least page 16, lines 20-24.) However, the disposing box 6 of Nakano does not provide any suitable structure to contain a matrix of n x m dispensing tips, as one of ordinary skill in the art would recognize. In this regard, the tips in disposing box 6 would form a pile and very likely could not be attached in an automated manner. The disposing box 6 of Nakano is simply for collecting used tips and, further, is quite incapable of serving as the second dispensing tip container of claim 1, since claim 1 includes the recitation that the “*a*

*second dispensing tip container configured to contain a matrix of n x m dispensing tips to permit the nozzles to be attached with a second dispensing tip array oriented in the X-axis direction... ”* Applicants submit Nakano cannot supply these features with dispensing box 6 since it is simply a used tip holding box without any suitable structure to hold tips in a manner to be attachable as required by claim 1.

As to the Examiner’s statement on page 2 and 3 of the Office Action, where the Examiner states: “*the reference does not specifically teach that the tips in the box would be arranged in a matrix. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the tips in this manner...”*

Applicants note that, under 35 U.S.C. §103, it is incumbent on the Examiner to provide a reason why one of ordinary skill in the art would have found it obvious to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See *Ex parte Clapp*, 227 USPQ 972 (B.P.A.I 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from Applicants’ disclosure. See, for example, *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed Cir. 1988).

Moreover, it is respectfully submitted that the courts have long held that it is impermissible to use Applicants’ claimed invention as an instruction manual or “template” to piece together teachings of the prior art so that the claimed invention is purportedly rendered obvious. See *In re Fritch*, 972 R.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed Cir. 1992).

Applicants submit that Nakano simply does not teach or suggest all the limitations of claim 1, as noted above. Applicants also submit that the claimed invention produces new and useful results that Nakano does not and cannot provide. In this regard, as examples, Applicants direct the Examiner to multiple passages in the specification where various inventive relationships recited by claim 1 provide new and improved results. Reference to Figure 5 of the invention may also be beneficial.

For example, the relationship and orientation of the first dispensing tip container and the second dispensing tip container with their corresponding respective first reagent vessel and second reagent vessels provides the basis for improved reagent delivery to the microplate wells. On page 21, lines 9 to page 22, line 2, as one example passage, there is described how these configurations and relationships can prevent reagent from being discharged from a dispensing tip to a position on the stage where there is no well. Applicants believe this to be a quite useful feature.

Further, on page 23, lines 7-15, a description may be found that the first and second dispensing tip containers and first and second reagent vessels may contain in a classified manner the dispensing tips to be used when discharging reagent to desired wells in one or the other directions thereby preventing mistakes between dispensing tips in one direction and those for the other direction when automatically attaching the dispensing tips to the nozzles. Moreover, at page 23, lines 15-23, a description may be found of how liquid reagents may be stored in a classified manner to be discharged into wells arranged in one direction or another, making it possible to automatically suck reagent into dispensing tips for one direction and those for the other direction, which reduces mistakes. Also, since there are more reagent wells, more increased types of reagents may be stored (due to more wells in two dispensing containers).

Further, on page 23, line 24 to page 24 line 10, a description may be found describing how dispensing tips may be arranged in the two different tip containers to make it possible to separately arrange beforehand longitudinal dispensing tips and lateral dispensing tips. Thus, it is possible to mount lateral and longitudinal dispensing tips without involving any mistakes between the two kinds. That is, by separating the types of tips by usage (e.g., longitudinally oriented tips for a specific purpose versus laterally oriented tips for a different purpose) before hand into two separate containers, mistakes can be minimized or avoided.

Further, on page 22, lines 3-13, a description may be found that describes how the first and second vessels are respectively divided into eight and twelve sections so it

is possible to store different kinds of reagents so in the case when the dispensing mechanism operates exclusively in the origin position, or in the case when the dispensing mechanism is operated in the 90-degree position, or when operated in both positions, it is possible to conduct experiments using various types of reagents.

Applicants submit that the configuration and orientation of the various system components such as the first and second tip dispensing containers in relation to one another and to the first and second reagent vessels, respectively, provides a basis to setup and use the system for reducing or eliminating mistakes by taking advantage of these mutual relationships and orientations such as by classifying reagents and/or dispensing tips by directionality, for example. The size of the matrices (n x m) in the tip dispensing containers also provides a basis to insure that the use of excessive amounts of reagents is avoided. For example, only eight tips can be filled if the orientation is maintained in a lateral orientation and using the second reagent vessel, while 12 tips may be filled in the longitudinal orientation and using first reagent vessel. This superior level of flexibility to avoid mistakes is not available in Nakano. Also, Nakano cannot separate reagents by reagent vessels for dispensing purposes since only one dispensing vessel exists. Further, Nakano cannot separate (or classify) tips by dispensing container since only one dispensing container exists. Nakano clearly does not and cannot provide the same level of flexibility and overall advantages as the claimed invention. Therefore, Applicants submit that since Nakano does not disclose or suggest all the features of the invention of claim 1, and in view of the superior results achievable by the claimed invention, the 103(a) rejections should now be withdrawn including the claims depending therefrom. Applicants submit that claim 1 is allowable along with those claims depending therefrom.

Nakano in view of Marouiss

First, claims 6-8 depends from an allowable independent claim 1 and therefore are allowable for at least this reason. Marouiss discloses an integrated sample

processing system but does not disclose first and second tip dispensing containers. Therefore, Marouiss does not overcome the shortcomings of Nakano. Accordingly, independent claim 1 is allowable over Nakano or Marouiss, either alone or in combination. Accordingly, claims 6-8 are allowable at least for the reasons discussed above with respect to independent claim 1, from which they depend as well as for their added features.

**Nakano in view of Hilson**

Hilson also fails to overcome the shortcomings of Nakano. In this regard, independent claim 1 is allowable over Nakano or Hilson, either alone or in combination. Accordingly, claims 9-10 are allowable at least for the reasons discussed above with respect to independent claim 1, from which they depend as well as for their added features.

***Newly Added Claims***

Support for newly added claims 12-14 may be found at least in Figures 3- 5 and corresponding text in the specification. Applicants submit that these new claims are allowable over the prior art of record.

### CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicants hereby make a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 23-1951.

Respectfully submitted,



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